

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the reasons that follow.

Claims 1-23 are currently pending. Claims 1 and 3 have been amended. Applicants submit that the amendments are fully supported by the specification as originally filed including, but not limited to the claims as originally filed and the examples provided. Support for amended claim 1 may be found in paragraphs 49 and 55 of the application as originally filed. No new matter has been added by way of amendment.

With regard to the specification, paragraphs 1-36 of the application as filed are requested to be deleted. These paragraphs are wholly redundant with paragraphs 37-72 of the application as originally filed. In the published application, US 2006/0063871, this repeat can be seen in a comparison of published paragraphs 1-32 as being redundant with 33-64.

### **I. Claim Rejections Under 35 U.S.C. § 102.**

Claims 1-4, 7-10, 13-21, and 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated, or in the alternative under 35 U.S.C. § 103(a) as unpatentable over GB 1,337,983 issued to Stewart *et al.*

Claim 1 currently recites:

A composition comprising a water-borne polymer comprises carboxylate groups; a metal cross-linking agent; and a stabilizing agent comprising from 2 to 10 carbon atoms and at least two functional groups independently selected from hydroxy and carboxy, wherein the amount of stabilizing agent is 1.4 mole percent or more of the amount of cross-linking agent;

wherein the composition is stable for at least a month at 40°C and up to six months at room temperature.

As will be readily recognized, the water-borne polymer has carboxylate functionality. Therefore, water-borne polymers include ester groups, acid groups, and/or anhydride groups either in the

polymer backbone or pendant to the polymer backbone. The presently claimed compositions have the ability to be stable up to a month at 40°C, and up to six months at room temperature. Paragraph 49.

Stewart is directed to solutions of zirconyl carbonates having improved stability at elevated temperatures. Page 1, lines 72-76. Stewart states that use of zirconium salts as insolubilizing agents for aqueous polymers solutions is limited by the uncontrolled speed of their gelling action. Page 1, lines 26-40. Solutions of the zirconyl species tend to form hydrated zirconium oxide upon storage above 40°C, leading to solidification of the solution. Page 1, lines 57-76. Thus, Stewart is directed to improving the stability of the zirconyl species, *alone*, with respect to gelation. See examples I-VIII. However, Stewart does not teach, or provide a reason to combine a stabilized zirconyl species with a carboxylated polymer such that the composition formed by the combination is stable.

In proffering the rejection, the Examiner points to Example VII of Stewart, as anticipating the presently claimed invention. However, Applicants first point out that the latex used in Example VII, does not have carboxylate functionality. Second, Applicants also point out that the zirconyl species is added to the latex, and the two are immediately applied to a paper base stock where they are cured at 80°C for 3 minutes. Page 5, lines 63-83. There simply is no stabilized solution of a “a water-borne polymer comprising carboxylate groups; a metal cross-linking agent; and a stabilizing agent...”

Stewart exemplifies and teaches that a zirconyl species may be stabilized toward gelation, but does not teach, suggest, or instruct one of skill in the art that compositions of a carboxylated polymer with a metal cross-linker may be prepared. In fact, Stewart teaches away from such a combination by stating that zirconyl species have uncontrolled speed of gelling action and exemplifying that stabilized zirconyl species with styrene-butadiene latexes are immediately cured upon mixing. See page 1, lines 31-35, and example VII.

To summarize, Stewart does not teach a composition, nor does Stewart teach, suggest, or direct one of skill in the art that such compositions can even be prepared, but rather Stewart actually teaches away from such compositions. In view of the above comments, Applicants submit that a *prima facie* case of obviousness has not been established for the presently claimed invention, and Applicants respectfully request withdrawal of the rejections in view of Stewart.

## **II. Claim Rejections Under 35 U.S.C. § 103.**

### *Stewart, Estes, and/or Gebhard*

Claims 1-23 stand rejected under 35 U.S.C. § 103(a) as being obvious over Stewart in view of U.S. Patent No. 5,661,208, issued to Estes, and/or U.S. Patent No. 6,847,867, issued to Gebhard *et al.* Applicants respectfully traverse this rejection.

As shown above, a *prima facie* case of obviousness in view of Stewart alone was not established with regard to the presently claimed invention. The Examiner has also combined Stewart with Estes and Gebhard to allegedly obviate claim 1 and the claims depending therefrom, however, Applicants respectfully submit that even the combination of Stewart with Estes and/or Gebhard fails to teach or suggest each and every element of the claims.

Estes is directed to polysiloxanes with acrylics as protectants for rubber or vinyl substrates. Col. 1, lines 38-43. There is absolutely no discussion of metal cross-linkers, or stabilized metal cross-linkers. The Examiner has cited Estes for the proposition that Joncryl may have the stated acid numbers. Office Action, page 3. While, such acid number may be reflected in Joncryl, Estes fails to provide teaching that is relevant to the failings of Stewart.

As noted above, the claims are directed to stable compositions of a metal cross-linker, water-borne polymer, and a stabilizing agent. Just as Stewart fails to teach or suggest each and every one of these elements in a manner which obviates the presently claimed

invention, so too does Estes fail. Estes fails to teach a composition of the metal cross-linking agent, water-borne polymer, and a stabilizing agent.

Gebhard is directed to the use of aqueous coating compositions having improved adhesion to friable surfaces such as chalky weathered paint surfaces and masonry surfaces. Col. 1, lines 10-12. There is no teaching relevant to the presently claimed invention and the failings of Stewart. The Examiner cited Gebhard for teaching the use of surfactants such as Tergitol or Triton, however these are ubiquitous components throughout polymer chemistry. Gebhard as a whole fails to provide relevant teaching of the presently claimed stabilized compositions. Gebhard simply fails to teach or suggest the use of metal cross linking agents, stabilizing agents, or compositions of water-borne polymers with metal cross linking agents and stabilizing agents.

Gebhard and Estes simply and completely fail to remedy the failings of Stewart with regard to teaching or suggesting each and every element of the claimed invention, and thereby fail to support a *prima facie* case of obviousness. As such, Applicants respectfully request withdrawal of the noted rejections.

*Demko/Stewart*

Claims 1-4, 4-14, 16-20 and 23 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,018,959, issued to Demko, and Stewart. Applicants respectfully traverse this rejection.

Applicants have shown above that Stewart alone fails to support a *prima facie* case of obviousness, and respectfully submit that Demko fails to remedy the failings of Stewart. In fact, Demko fails in exactly the same manner as Stewart.

Demko teaches water dispersable crosslinkable polymers, including alkyl esters of acrylic and methacrylic acids, mono- or dialkyl esters of dicarboxylic acids, and others, which may be used in adhesive compositions for corrugated board. Col. 1, lines 6-7 and col. 3, lines 4-29. It is required that the components of the invention be combined with acidic metal salt curing

agents. Col. 4, lines 40-57. However, just like Stewart, such compositions of the polymer with the metal crosslinking agent should only be prepared within a short time before use. For example, “[t]hey may be added in either manner at the time the adhesive formulations are to be utilized, or if added earlier, they should not be introduced any more than about 48 hours prior to such utilization.” Col. 4, lines 58-63. Thus, Demko, like Stewart, actually teaches away from stable metal cross-linker/water borne polymer compositions.

In view of the failings of both Demko and Stewart, and their teaching away of the presently claimed stable compositions, Applicants respectfully request that the rejection in view of Demko and Stewart be withdrawn.

*Demko/Stewart/Estes/Gebhard*

Claims 1-20, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as obvious over Demko and Stewart, and further in view of Estes and/or Gebhard. Applicants respectfully traverse this rejection.

Applicants have shown above that each of these cited references fails alone or in combination to obviate each and every element of the presently claimed invention. In fact, Stewart and Demko expressly counsel the skilled artisan away from such stabilized solutions, and Estes and Gebhard provide mere tangential application to components that are well known in the art. Applicants stand by their above remarks with regard to each reference, and submit that each alone or in combination fails to support a *prima facie* case of obviousness. As such, Applicants respectfully request withdrawal of the rejection, and that the presently claimed invention be allowed to move forward to issuance.

### **III. Double Patenting**

Claims 1-20, 22, and 23 are provisionally rejected for obviousness-type double patenting (ODP) over claims 1-8, 20, 21, and 25-28 of co-pending U.S. Application No. 11/230,114. As of March 18, 2008, the ‘114 application was still pending and thus the rejection

remains provisional. Applicants note that the M.P.E.P. addresses this situation at § 804 I.B.1., stating that

If a “provisional” nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer...If both applications are filed on the same day, the examiner should determine which application claims the base invention and which application claims the improvement (added limitations). The ODP rejection in the base application can be withdrawn without a terminal disclaimer.

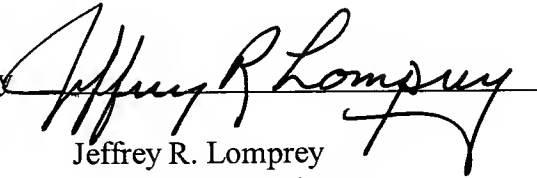
As Applicants believe that the other rejections pending in the application have been overcome for the reasons above, Applicants respectfully request that the Examiner follow the procedure set forth at M.P.E.P. § 804 I.B.1. and withdraw the provisional rejection over the ‘114 application. In requesting the withdrawal of the ODP rejection, Applicants make no statements regarding the propriety of the rejection, and respectfully reserve the right to challenge such propriety, or file a terminal disclaimer over the ‘114 application.

### CONCLUSION

Applicants believe that the present application is now in condition for allowance, and request that the Examiner remove all rejections, allowing the application to move forward to issuance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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